NEW ORLEANS EDUCATOR PROJECT

Supporting Effective Educator Development Program
CFDA Number: 84.423(A)

Absolute Priority 1: Supporting effective educators
Competitive Preference Priority 1: Promoting diversity in the educator workforce

NEW ORLEANS EDUCATOR PROJECT
ABSOLUTE PRIORITY 1 AND COMPETITIVE PREFERENCE PRIORITY 1

The New Orleans Educator Project (NOLA EP) addresses Absolute Priority 1 and Competitive Preference Priority 1 through its goal to raise student achievement in New Orleans public schools with high concentrations of High-Need Students[1] by recruiting, preparing, and developing 862 Highly-Effective, culturally competent teachers from diverse backgrounds by 2020. NOLA EP is a unique and innovative partnership of teacher training programs, including two local institutions of higher education (IHE) – Xavier University of Louisiana (lead applicant) and Loyola University New Orleans – and three national non-profits – Teach For America Greater New Orleans (TFA), TNTP's teachNOLA program (TNTP), and Relay Graduate School of Education (Relay). These partners will work together to solve teacher pipeline challenges across the city, implementing their unique teacher preparation models to meet the needs of schools with high concentrations of High-Need Students while collaborating on best practices and problem-solving. Specifically, partners will 1) recruit, prepare, and develop Highly Effective Teachers to serve in schools serving high concentrations of High-Need Students across New Orleans; 2) engage in targeted recruitment activities to increase the number of teachers of color; 3) implement activities to enhance the cultural competency of their teachers; and 4) participate in structured collaborations to learn from local and national experts and one another. Xavier, the lead partner on NOLA EP, is well-positioned to lead collaborative work with partners as a local HBCU with a longstanding, effective, and highly-regarded education program and deep expertise in large-scale diverse recruitment

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[1] As defined by SEED NIA; see Appendix A1 for details.

strategies and culturally responsive teaching and learning. New Schools for New Orleans (Appendix A2), a local education nonprofit with deep relationships with all grant partners, will support NOLA EP through grant monitoring and assisting with citywide teacher recruitment.

QUALITY OF PROJECT DESIGN

A1. Exceptional approach to priorities

Teacher effectiveness is the single most important school-based determinant of student achievement. Even one effective teacher in one school year can help students advance one-and-a-half to two years academically as compared to an average teacher.[2] In New Orleans, building pipelines to meet the demand for excellent teachers is perhaps the most pressing citywide challenge we face. Estimates show that New Orleans will need to hire between 700 and 900 teachers annually by 2020, up 40% from 2010. With citywide attrition rates approaching 25% annually, current pipelines will be insufficient to meet the demand without significant expansion.

While the programs proposed for the NOLA Educator Project are existing programs – some in the start-up phase (Xavier and Loyola) and some ongoing (Relay, TFA, TNTP) – they do not currently have funds to continue or accelerate their programming. Without new funding, these programs will not be able to sustain or increase their programming to contribute Highly Effective Teachers to serve High-Need Students in New Orleans. With these programs currently providing the large majority of

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[2] Tucker, P. and Stronge, J. (2005). *Linking Teacher Evaluation and Student Learning.* Chapter 1: "The Power of an Effective Teacher and Why We Should Assess It."

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novice teachers in New Orleans, this looming gap threatens the significant but fragile student achievement progress the city has made since Hurricane Katrina.

Furthermore, in the years since Katrina, the teaching force in New Orleans has become significantly less representative of the student population it serves. While 82% of public school students are black, only 49% of teachers identify as black.[3] Research shows that the opportunity to learn from educators of color has significant impact on academic achievement for students of color, who make up 92% of our city's public schools. This has created a cultural competence gap between those teachers who have been trained in culturally responsive methods and those who have not.

Both challenges are exacerbated by the context in which New Orleans schools operate. By 2018, 100% of public school students will likely attend charter schools. The district has transformed from operator to regulator. As a result, there is no one central teacher recruitment entity to set strategy and partner with universities or nonprofits. It is left to the teacher preparation programs, the schools, and their nonprofit partners to ensure that New Orleans has the teachers it needs to serve all students well.

NOLA EP addresses each of these problems through an innovative partnership between national talent providers—TFA, TNTP, and Relay GSE—and two local universities preparing teachers—Loyola and Xavier. By the end of the grant period, the partnership will have produced 862 teachers trained in effective and proven teacher preparation methods, serving students in 55 schools serving high concentrations of High-

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[3] Barrett, N. and Harris, D. (2014). *Significant Changes in the New Orleans Teacher Workforce.* Education Research Alliance for New Orleans.

Need Students (Appendix A1). It will have increased the percentage of teachers of color in New Orleans schools and enhanced the cultural competency of each new teacher. And, its members will have collaborated on an ongoing basis to solve shared challenges. See Appendix A3 for the NOLA EP logic model.

While elements of the five partner programs may differ in some respects (residency vs pre-service; local recruitment vs national recruitment, etc), all share core elements that are tied to research-based, effective teacher preparation (Table 1). Each program implements rigorous selection processes; each ensures that teachers receive ongoing coaching grounded in observation and feedback; and each provides training in culturally responsive teaching methods. Three of the five use competency-based progression in order to reach certification.

COMPONENTS OF PROGRAMS – TABLE 1

	Xavier	Loyola	Relay	TFA	TNTP
Selective recruitment	X	X	X	X	X
Residency	X	X	X		
Observation and feedback	X	X	X	X	X
Competency-based certification	X	**By fall 2018**	X	**Does not certify teachers**	X
Cultural competency training	X	X	X	X	X

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Xavier, Loyola, and Relay's programs employ a residency model in which emerging teachers spend their first year in the classroom working under a mentor teacher before leading their own classrooms in their second year. During the two years of these programs, residents simultaneously complete a Master of Arts in Teaching (MAT) and a certification. TFA and TNTP's models use high-quality pre-service training, which includes graduate-level coursework and practicum-based training, to prepare emerging teachers to lead classrooms in their first year. Participants in these programs pursue certification simultaneously.

One of the critical elements of NOLA EP is the focus on cultural competency, a commitment shared by all five partners. Because New Orleans' economically disadvantaged (ED) students are overwhelmingly people of color, addressing achievement gaps will require addressing issues of cultural competence, including issues related to race and bias. Research finds that "culturally responsive pedagogy [CRP] and positive racial identity can play major roles in promoting academic achievement," specifically for youth of color.[4] A 2005 study found that students of teachers trained in culturally responsive teaching methods had greater opportunities to learn, received more appropriate instruction, and were more engaged in learning tasks than peers.[5] Through this project, New Orleans can become a model for other cities in how to address cultural competence on a citywide level.

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[4] Hanley, M., Noblit, G. (2009). *Cultural Responsiveness, Racial Identity and Academic Success: A Review of Literature*. Pittsburg, PA: The Heinz Endowments, George Mason University, University of North Carolina at Chapel Hill.

[5] Burns, R. et al. (2005). *Closing Achievement Gaps by Creating Culturally Responsive Schools*. Edvantia.

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NOLA EP is also unique in that to recruit, train, and develop Highly Effective Teachers for the city, the project leverages a diversity of training pathways, from residencies, to traditional university programs, to pre-service summer intensives. By supporting multiple and varied pathways to teaching, NOLA EP allows partners to build on their particular areas of expertise to get New Orleans the teachers that it needs, while ensuring educators entering the profession can access high-quality development opportunities regardless of the type of program they choose.

Finally, this project also offers an exciting opportunity to reimagine the relationship between IHEs and teacher training nonprofits. As other cities struggle with shortages of effective teachers, NOLA EP could provide a model for how they might work together to solve teacher recruitment and preparation problems on a citywide scale.

A2. Quality of programs

Evidence shows that the NOLA EP partner models are effective at raising student achievement, indicating that the quality, intensity, and duration of the programs are adequate to meet the goal of measurably raising student achievement for High-Need Students. Below is a brief description of each program's model, followed by evidence of effectiveness of these models. See Appendix A4 for further details on the programs.

TEACHERS TRAINED BY NOLA EP - TABLE 2

Program	Teachers by year			Total
	Y1	Y2	Y3	
Xavier	25	25	25	75
Loyola	10	12	15	37
Relay	50	50	50	150

TFA	100	100	100	300
TNTP	100	100	100	300
Total	**360**	**360**	**360**	**862**

<u>*Residency Programs*</u>

1. Xavier University of Louisiana – Norman C. Francis Teacher Residency

Xavier will recruit, prepare, and develop 75 new teachers over the course of the grant through the Norman C. Francis Teacher Residency (NCFTR), a partnership between Xavier and six New Orleans charter management organizations that operate 38 schools. This is the first teacher residency partnership between an HBCU and charter management organizations in the country. NCFTR combines Xavier's rigorous two-year Master of Arts in Teaching program with a local residency in which participants embed in public charter schools serving a high concentration of High-Need Students (Appendix A1) around the city. Residents work under a mentor teacher for a full year, receiving individualized training and feedback on key teaching skills before becoming a full-time teacher of record.

Competitive Preference Priority 1 – Xavier prioritizes embedding cultural competence and culturally responsive pedagogy learning throughout the NCFTR program. Residents will study, research, and discuss the role of cultural competence and culturally responsive pedagogy in teaching and learning through various required courses, in order to build skills to use during the residency and beyond. Throughout their classroom practice, residents will reflect, through daily journaling, about their use of this pedagogy throughout the day—answering questions of how well their ethics, behaviors, class

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structures, policies and procedures enable them to teach every child effectively.

Xavier has also successfully built recruitment strategies to enroll a diverse cohort of teachers in NCFTR. Seventy-eight percent of the initial cohort identify as people of color. Recruitment strategies also include preference for New Orleans natives, who have the full context of the city in which they will be serving and are more likely to share experiences with the students they will teach. Xavier will use this grant to continue building these strategies, with a specific focus on bringing in more black, Latino/a, and Vietnamese residents to serve students. Key efforts to support and retain teachers from a diverse set of backgrounds include preparing potential residents for success on Praxis exams to eliminate class-based barriers to entry, executing regular cycles of observation and feedback, and building strong relationships between residents and mentors. Providing the preference for New Orleans natives will also support retention—residents with local ties are more likely to stay in teaching beyond the three-year commitment.

2. Relay Graduate School of Education

Relay will recruit, prepare, and develop 150 teachers over the course of the grant through the Relay Teaching Residency. In the first year of the program, residents immerse themselves in their schools, working directly with students under the close supervision of a mentor teacher. Residents simultaneously enroll in the Relay MAT program, where they take classes on core teaching techniques and content-specific instruction, then rehearse those techniques and receive expert feedback during weekly practice sessions with faculty and classmates. Residents participate in weekly deliberate practice sessions, each lasting three hours, to develop and refine concrete teaching skills that maximize impact on student achievement. As they develop their skills and the school

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year progresses, residents teach more often and take on more responsibilities in the classroom. Successful first-year residents transition into lead teaching roles in the second year of the program, when they complete their MAT at Relay.

Competitive Preference Priority 1 - One of four key elements of effective instruction that make up Relay's curriculum is Self and Other People (Appendix A5). This course contains multiple modules that every resident is required to both complete and pass to receive certification. In this course, teachers learn how to be culturally responsive educators by addressing issues of race, class, and bias in the classroom context. Teachers hone their communication skills to effectively work with students and families across lines of difference. This course also draws on the research around positive psychology to help teachers identify and understand different character strengths in students and position them to model these for their classes.

One of Relay's institutional priorities specifically focuses on recruiting and retaining teachers of color. During the 2016-17 school year, 70% of Relay residents self-identified as people of color. Relay plans to maintain at least that percentage through the life of this grant.

3. Loyola University in New Orleans

Loyola will recruit and train 37 teachers over the course of the grant through its new Master of Arts in Teaching (MAT) program, which prepares teachers to apply for certification in grades 6-12. The year-long program model emphasizes competency-based skills and real-world applications, and includes significant advising and coaching for teachers. Each MAT student will also participate in a residency, embedding in a New Orleans classroom, and receive opportunities to practice skills and receive feedback from

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a mentor teacher. As this is a new pipeline for New Orleans, it will offer a new pathway to increase the number of certified teachers with deep content knowledge, and address a significant need for middle and high school teachers.

Competitive Preference Priority 1 – All students in Loyola's MAT program must take a Multiculturalism and Social Justice course focused on understanding the complexities of race, class, and other identities in classroom, teaching, learning, and student relationship contexts. This course, as well as the others offered in Loyola's MAT track, focuses on giving teachers knowledge and tools to "think critically and act justly," a key value of the institution. The current MAT cohort is about 25% teachers of color, and Loyola will use grant funds to institute targeted recruitment strategies to increase the number of teachers of color in the cohort each grant year. These efforts will specifically focus on bringing in more black, Latino/a and Asian teachers to be more reflective of the student population in New Orleans. To improve support and retention of teachers from diverse backgrounds, Loyola emphasizes meeting the needs of each individual in the program and designing flexible schedules to accommodate students. Each will have two advisors to help ensure they are on track to program completion, and tuition for the program is half of other graduate tuition tracks at the school to ensure the program is open to a larger population.

Summer Pre-service Training, Teacher of Record Programs – TFA and TNTP

1. Teach for America Greater New Orleans

TFA finds, develops, and supports a diverse network of teachers to expand opportunities for children from underserved communities across the country. Over the course of this grant, TFA will prepare and support a racially and socioeconomically diverse corps of 300 new teachers for placement in 38 public schools in New Orleans.

As a result of TFA's coaching and professional development, first and second-year corps members will create culturally responsive classroom environments that meet or exceed ambitious student learning goals set in partnership with teacher coaches and principals. Corps member training begins in a summer institute focused on essential classroom skills and continues throughout their two-year commitment through observation and feedback cycles every 1.5 weeks, quarterly step-backs with teacher coaches to assess skill development and course correct as necessary, and regular whole-corps and small-group professional development opportunities.

TFA offers an important pathway into teaching for promising college graduates who may not have otherwise considered entering the profession—although historically only 15% of incoming members report that teaching was one of their top career options, nearly two-thirds stay in education after completing their commitments.

Competitive Preference Priority 1- Of the TFA corps members who matriculated to Greater New Orleans in 2015 and 2016, 41% identified as people of color, and 54% were identified as people of color and/or were a Pell Grant Recipient, an indicator of low-income background. Because recruitment activities are managed nationally and are beyond the scope of this regional proposal to fund activities driven by Teach For America - Greater New Orleans, the focus of TFA's commitment to the diversity of local corps is on inclusivity: having no gaps in the retention of the corps throughout their two-year commitment based on race or income. To ensure financial impediments are not a barrier to entering the program, TFA provides financial aid for corps members' transition to teaching and through the AmeriCorps partnership loan forbearance.

Corps members from all racial and socioeconomic backgrounds will receive training and support in TFA's Diversity, Equity and Inclusiveness Foundations to ensure they are equipped with the skills, mindsets and knowledge to manage classrooms that support all students to achieve (Appendix A6). During recruitment and orientation, TFA provides regular learning opportunities for corps members to develop context of the community in which they will work. Coaches provide ongoing individual and collective spaces for reflections on identity, historical context, and advancing cultural responsiveness throughout the two-year commitment.

2. TNTP: teachNOLA

Through their teachNOLA fellows program, TNTP will recruit and train 225-300 new teachers over the course of the grant for placement in 30 - 40 charter schools in New Orleans. At the start of their experience, all fellows participate in pre-service training. Training is centered around actual teaching experience and focused practice on core instructional skills, such as creating a positive classroom culture and delivering academic content clearly. Fellows have ample opportunity to practice, reflect, and improve, until essential teaching techniques become second nature. While completing their first year in the classroom, fellows engage in subject-specific coursework and continue to build the more advanced skills that effective teachers deploy in their classrooms every day. The teachNOLA program is specifically designed to ensure that new teachers working with High-Need Students have the classroom skills and deep content knowledge necessary to deliver rigorous, Common Core State Standards-aligned instruction from their first day in the classroom (Appendix A7). TNTP uses real-time teacher performance and classroom effectiveness data to drive certification decisions; only teachers who demonstrate the

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ability to master key skills and help students learn earn licensure. Upon graduating, fellows are recognized as having a proven record of classroom success.

Competitive Preference Priority 1- TNTP is committed to building the cultural competence and pedagogy skills of each teacher in the program. In order to reach all learners and build trusting relationships across difference, programming will focus on a series of trainings to help fellows develop emotional intelligence and self-awareness to challenge their cultural assumptions. Trainings will support teachers to build the disposition, mindset and awareness necessary to understand the inner-workings of students and their cultures as well as a set of culturally responsive teaching skills and practices to ensure that the content and teaching methods ultimately help all kids learn.

TNTP recruits diverse cohorts that reflect the communities where teachNOLA fellows serve. In 2016, 46% of the cohort self-identified as a person of color. TNTP has taken steps to make its application and selection process more equitable. Selection staff are trained to mitigate implicit bias and utilize a blind review process, so that each candidate is evaluated without revealing name or ethnicity. Nationally, TNTP has closed the gap between white candidates and candidates of color in its point allocation process during candidate selection from fifteen points to fewer than three. Grant funds will allow TNTP to continue to assess and refine the recruitment and cultivation strategies that have proved to be successful in attracting candidates from diverse backgrounds to programs. TNTP is also reexamining support and retention strategies to keep effective fellows in the classrooms where students need them the most. In schools where fellows teach, TNTP is moving toward a model that emphasizes building the capacity of instructional staff to also provide effective coaching and feedback to first-year fellows in their buildings,

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ultimately supporting their long-term growth and retention. This would be a new strategy for TNTP, allowing the program to pilot models here that could have national impact.

Evidence of Effectiveness for All Partners

Having operated in New Orleans for 26 years and 11 years respectively, TFA and TNTP teachers have demonstrated that they are highly effective. In New Orleans, over 80% of TFA teachers are considered top-quartile teachers, attaining results that placed them within the top 25% of state teachers teaching similar subjects. TNTP's teachNOLA fellows are also high-performers, with almost 50% of them outperforming the statewide average, as compared to just 39% of other first-year teachers around the state.

While the residency programs within the NOLA EP project have not yet produced effectiveness data[6], evidence from other residency programs shows great promise in increasing teacher effectiveness. Evidence from strong urban teacher residencies suggests that teachers prepared through these programs are more effective than traditionally-trained teachers. A study of the Memphis Teacher Residency found that the program produced novice teachers who were more effective than other non-tenured teachers in the district, as measured by the value-added scores (which measure a teachers' impact on student achievement).[7] A study of the Boston Teacher Residency Program (BTR) found that in their fourth and fifth years of teaching, BTR teachers were statistically more

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[6] Relay's 1st cohort of residents completed their first year of full-time teaching in May 2017, but their performance scores are not yet available. Residents in the first cohorts of Xavier and Loyola's programs will begin in summer 2017.

[7] Silva, T. et. al. (2014). *Teaching Residency Programs: A Multisite Look at a New Model to Prepare Teachers for High-Need Schools* (NCEE 2015-4002). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

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effective math instructors that their non-BTR counterparts. The BTR also showed an impact on teacher retention, with those in the residency more likely to continue teaching in their district into their fifth year.[8]

Meeting Moderate Evidence Standards – TFA and TNTP: Research studies have shown that TFA and TNTP's models produce teachers who are as effective or more effective than other teachers. A Mathematica study that meets the What Works Clearinghouse standard for strong evidence with a rating of "meets WWC group design standards without reservations" showed that TNTP Teaching Fellows in secondary math were as effective as comparison teachers from traditional certification routes.[9] Compared to other less-selective alternative certification routes, Teaching Fellows were significantly more effective, increasing student achievement in math by 0.13 standard deviations. The teachNOLA fellows in this proposal will participate in a program that includes the same recruitment, selection, pre-service training, in-service training, coaching and effectiveness screen used in TNTP's Teaching Fellows program evaluated in this study. See the Evidence of Effectiveness form for further information.

This same study showed that students taught by secondary school math teachers from TFA scored 0.07 standard deviations higher on end-of-year math assessments than students of other teachers teaching the same classes in the same schools who entered teaching via traditional or less-selective alternative programs. This difference translated into an additional 2.6 months of school for the average student nationwide.

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[8] Ibid

[9] Clark, M., et. al. (2013). *The Effectiveness of Secondary Math Teachers from Teach For America and the Teaching Fellows Programs* (NCEE 2013-4015). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

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The study also found that novice TFA teachers (those in their first three years of teaching) were more effective than both novice and experienced comparison teachers. Students of novice TFA teachers outscored students of novice comparison teachers by 0.08 standard deviations. Students of novice TFA teachers also outperformed students of more experienced comparison teachers (those with more than three years of experience) by 0.07 standard deviations. The TFA corps members in this proposal will participate in a program that includes the same recruitment, selection, pre-service training, in-service training, coaching and effectiveness screen used in TFA's program evaluated in this study. See the Evidence of Effectiveness form for further information.

Meeting Moderate Evidence Standards – Residencies (Loyola, Relay, Xavier): All residency programs in this application also include two key components—a) induction training and b) ongoing observation and feedback coaching —supported as part of a broader study that meets the What Works Clearinghouse standard for strong evidence, with a rating of "meets WWC group design standards with reservations." These two components were found to be key factors in enhancing secondary school instruction and student achievement.[10] The study focused on improving teacher-student interactions in secondary classrooms to enhance student motivational and instructional qualities of teachers' ongoing daily interactions with students. The researchers describe an intervention group that participated in a summer program that involved induction development in the main aspects of their teacher/student interaction model along with ongoing (video) observation and feedback. This group also had access to exemplar

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[10] Allen, J. et al. (2011). Science, 333(6045), 1034–1037. Retrieved from: https://eric.ed.gov/?id=ED556046)

videos (a characteristic also common to some residency programs involved in this application). Compared to a control group, the intervention group produced substantial gains in measured student achievement in the year following its completion, equivalent to moving the average student from the 50th to the 59th percentile in achievement test scores. Every residency program funded by NOLA EP emphasizes rigorous induction training followed by regular observation and feedback cycles completed by teacher mentors to enhance teacher skill in both motivating students and delivering long-term academic achievement. Mentors consistently observe residents teaching in real time throughout the residency, and, in some programs, also record residents teaching for joint review. By prioritizing consistent practice with regular observations, mentor teachers are able to provide specific, targeted feedback to help residents build on strengths in teaching practice and improve in his/her growth areas.

A3. Collaboration of partners

NOLA EP will create a comprehensive, coordinated approach to identifying and addressing teacher supply and training gaps by bringing together five talent providers varied in program type. Partners can build on their individual strengths and plug in where they are best suited to contribute an insight or best practice, maximizing effectiveness of teacher training and development citywide. Additionally, three partners—TFA, TNTP, and, through a subgrant, Xavier—have received previous SEED grants to bolster their high-quality teacher training programs.[11]

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[11] TFA received SEED grants in 2012, 2013, and 2015. TNTP received a 2015 SEED grant. Xavier was a subgrantee of National Center for Teacher Residencies, a 2015 winner.

NOLA EP's unique opportunity for collaboration across the full range of ways teachers can be prepared to work in our city's schools—residencies, university residency programs, and programs that produce teachers of record after summer pre-service training —is especially essential in the New Orleans context. New Orleans' school choice system applies to educators as well as families. Because teachers can choose the school or network that best fits their needs and philosophy, educator teams trained in various types of programs will be working together within schools. Increasing alignment around key priorities will help ensure that regardless of where or how they are trained, teachers are prepared to be effective members of these teams.

To support successful collaboration, Xavier will act as a convener for grant partners. NOLA EP creates a consortium, led by Xavier, that meets quarterly to monitor progress to goals, problem-solve, and share best practices. Each consortium meeting will focus on a critical issue related to partners' programming such as 1) recruitment, 2) retention, 3) working with partner schools, 4) increasing teachers' content knowledge, or 5) cultural competency. Consortium meetings will allow partners from across the city to learn from each other and support each other's continuing development. For example, NOLA EP includes both an HBCU and several nonprofits with proven track records recruiting diverse candidate pools. By collaborating, programs with specific expertise in diverse recruitment can share best practices with partner organizations.

NOLA EP partners will support one another's efforts to advance cultural competency among teachers in New Orleans. Over the life of the grant, Xavier will facilitate a consultancy model for partners to engage with each other's cultural competency work with incoming teachers. Each grant partner will host fellow partners to

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observe the delivery of a cultural competency-focused class or training session for prospective teachers at least once over the course of the grant. Visiting partners will provide feedback, share resources, and engage in consultancy protocols around a topic selected by the host organization.

NOLA EP will also help ensure alignment with new state requirements regarding teacher training. Louisiana will soon require that all university teacher preparation programs incorporate a one-year residency. Residencies allow new teachers to embed in a classroom to test their skills and gain practical experience under the supervision of a lead teacher before they run their own classrooms. Relay, Xavier, and Loyola are already implementing high-quality residency programs. Although Loyola and Xavier both currently have residency programs for their MAT graduate students, they must also develop programs for their undergraduate teaching program to be compliant. NOLA EP will provide a venue for each residency partner to share strategies essential to building and sustaining high-quality programs, and can help to codify models that can be replicated in other IHEs across the state. See Section B4 for dissemination plan.

To help facilitate successful citywide teacher recruitment throughout the grant term, NSNO will hire a full-time Director of Talent Development. The Director will work with NOLA EP partners to develop and implement citywide recruitment strategies aimed at increasing the number and quality of novice teachers entering the profession.

A4. A focus on those with greatest needs

NOLA EP will address teacher pipeline shortages for New Orleans public schools that currently threaten student achievement. All grant partners work with public charter schools in New Orleans, and the partner schools identified for this grant all serve at least

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50% economically disadvantaged (ED) students – most serve ED populations well above 80%. Data from the Louisiana Department of Education (LDOE) in Appendix A1 shows the percentage of students in 2015-16 who are economically disadvantaged.

Ninety-two percent of public school students in New Orleans are people of color, and 82% are black. Race and socioeconomic status are closely linked in New Orleans, with 35% of black families living in poverty compared to only 12% of white families.[12] According to the LDOE, only 25% of students of color in New Orleans have reached "Mastery" on state exams—a proxy for college and career readiness—compared to 47% of white peers. Through Competitive Preference Priority 1, NOLA EP supports students not only by providing effectively-trained teachers to help learners catch up, but also through each partner's focus on increasing the diversity of their teaching cohorts and their preparedness to work with students of color.

Implicit bias refers to stereotypes and attitudes about a person/group based on their identity that are activated unconsciously and involuntarily.[13] Recognizing and subverting these biases is critical to student success—unexamined implicit bias leads to inequitable conditions that limit academic growth of students of color. A 2008 study by the London School of Economics showed that white teachers graded black and Latino/a students more harshly for the same performance, accounting for as much as 22% of the

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[12] McConduit-Diggs, E. (2015). *State of Black New Orleans 10 Years Post-Katrina.* Urban League of Greater New Orleans.

[13] Staats, C. et al. (2015). *State of the Science: Implicit Bias Review 2015.* Kirwan Institute.

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achievement gap between white students and students of color.[14] NOLA EP includes

exploration of race, bias, and cultural competency for teachers because studies have

shown that "training seminars that acknowledge and promote an appreciation of group

differences and multi-cultural viewpoints can help reduce implicit bias,"[15] laying the

foundation for equitable classroom practices that remove potential achievement barriers

for students of color.

A5. Successfully addressing the needs of the target population

Increasing the number of Highly Effective Teachers is particularly essential to the

success of New Orleans' economically disadvantaged public school population. For

economically disadvantaged students who may enter school several grade levels behind,

having three effective teachers in a row can actually close the achievement gap between

groups of students.[16] With only 26% of students performing at proficiency level in the

schools participating in NOLA EP, teachers who can accelerate learning at a faster rate

are critical to ensuring students are on track. As described in Section A2, the models that

NOLA EP partners are implementing have been shown to be effective at raising student

achievement. In addition to utilizing proven models, each grant partner prioritizes

measuring and tracking teacher effectiveness to ensure maximum positive impact on

student achievement.

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[14] Ouazad, A. (2008). *Assessed by a Teacher Like Me: Race, Gender, and Subjective Evaluations.* Centre for the Economics of Education, London School of Economics.

[15] (2012). *Strategies to Reduce the Influence of Implicit Bias.* National Center for State Courts.

[16] Tucker, P. and Stronge, J. (2005) *Linking Teacher Evaluation and Student Learning.* Chapter 1: "The Power of an Effective Teacher and Why We Should Assess It."

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*teachNOLA***:** teachNOLA fellows are evaluated using TNTP's Assessment of Classroom Effectiveness (ACE). Through ACE, TNTP creates the fullest possible picture of teaching performance using multiple measures such as principal evaluations, classroom observation and feedback cycles, and student surveys in addition to measures of student learning when such appropriate measures are available. These assessments allow TNTP to give specific, actionable feedback to teachers throughout time in the program to drive student outcomes.

TFA: TFA measures teacher effectiveness both in relation to Louisiana's teacher evaluation system and by using a culturally-responsive framework for dimensions of student learning and leadership, Teaching As Leadership (Appendix A8). TFA's goal is for corps members' combined average Compass rating[17] to be a "3" or higher, demonstrating that on average teachers are meeting the ambitious Student Learning Targets (SLTs) that they set in partnership with their principals for their classrooms. TFA looks for the majority of its first year corps member classrooms to be assessed in the "Solid Growth" range for "Academic Growth," "Personal Growth," and "Access" within the Teaching as Leadership rubric. By the second year, the goal is for the majority of second year corps member classrooms to be assessed in the "Dramatic Growth" range along those same dimensions.

Relay: Relay assesses resident effectiveness through Gateway Assessments, which measure progress in mastering key teaching skills and techniques. The program requires residents to pass five key Gateway Assessments that gradually increase in

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[17] Compass is a tool released by the Louisiana Department of Education that supports teachers and principals in defining expectations for student learning and monitoring progress against those goals throughout the year.

difficulty, the final of which is being hired as a full-time teacher of record. Other Gateways include: Mindsets and Professionalism, Classroom Management, Introducing Material, and Teaching a Full Lesson. Twenty-four of 26 eligible residents in 2016-17 were hired into full-time teaching positions for the 2017-18 school year.

Loyola: Loyola measures teacher effectiveness through a combination of assessments and observation and feedback cycles. These include: Praxis scores; onsite observations of planning, class management, instruction, and assessment using a rubric based on the Compass/Danielson Model; assessment of video-taped lessons; dispositions rubric; and evaluation of student learning using pre- and post- assessment data. Having multiple measures throughout the length of the program allows staff and mentors to assess challenges and help students course correct as necessary. Loyola's MAT program just completed its first year of operation, so there is limited data available at this time. The first cohort all successfully passed the Subject Area Content part of the Praxis II and have all maintained GPAs of 3.5 or higher.

Xavier: Xavier tracks residents' progress throughout the year to ensure that they are not only learning, but also applying what they learn in the classroom. Xavier measures teacher effectiveness through GPA in the MAT program, percent Praxis passage, coursework assessments, mentor teacher observation and feedback, an employer survey, and a modified Compass survey. Throughout the residency year, all residents will demonstrate knowledge and skills learned and practiced across courses, institutes, and the classroom practicum by engaging in performance assessments known as Gateways. Gateways measure resident performance of core learning standards in a sequence that aligns with coursework and institutes. The Gateways are: Understanding Families and

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Community, Classroom Management, Lesson Planning, and Delivering Instruction.

Rubrics are used to track successes and areas where additional support is needed.

SIGNIFICANCE

B1. Importance or magnitude of results or outcomes

NOLA EP will produce 862 Highly-Effective Teachers who will serve in 55 schools in New Orleans that serve 66% of public school students (32,452 children), 100% of whom attend schools with high concentrations of High-Need Students. While the NOLA EP teachers will serve approximately 32,452 students directly in the classroom over the life of the grant, they will also impact all 49,386 children in the buildings through their work on teams with other teachers. With the average proficiency rate at these schools at 26%, most students are behind where they need to be to be college and career ready. This project will utilize proven teacher recruitment, preparation, and development models that have been shown to produce Highly-Effective teachers who can accelerate learning at a quicker rate than other teachers (see section A2) to help these students attain the higher achievement levels that will lead to greater success in career and college. Overall, the NOLA EP teachers will serve a majority of schools in New Orleans, having a broad impact across the system.

NOLA EP will not only have a direct impact on the children served in New Orleans schools, it will also produce a national proof point by creating a partnership for how teacher recruitment, preparation, and development partners can collaborate to meet teacher pipeline needs in a decentralized district. Solving the issue of filling teacher gaps in the system now is especially critical given the place New Orleans occupies in the national landscape. As other cities such as Memphis, Washington DC, Camden, and

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Denver see their charter market share grow, they will likely face similar challenges

around talent. By creating sustainable pipelines of high-quality educators that exist

outside of the district office, New Orleans can provide a viable model for other cities.

B2. Reasonable costs

As noted above, New Orleans is a public school system unlike any other. With

nearly all public school students attending charter schools, the primary function of the

districts is to regulate, not to operate, public schools. In its unification plan, the Orleans

Parish School Board (OPSB), the entity who will oversee all schools in this project,

specifically identified talent as an area that it would seek to outsource (and possibly

regulate), but not directly manage.[18]

As a result of this unique structure, the partners in this grant act as the de facto

recruitment, preparation, and training arm for public schools in New Orleans. By Year 3,

these programs together will recruit, train, and place 862 teachers at an average cost of

approximately $19,505 per teacher[19] – a figure that compares favorably with the costs of

replacing teachers in urban districts that serve similar populations, such as Chicago and

Milwaukee,[20] which can be as high as $20,000 per year.[21] Moreover, given the quality of

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[18] Unification Plan: http://opsb.us/wp-content/uploads/2016/05/Unification-Plan-Aug-30-OPSB-Approved.pdf

[19] This figure was calculated using the total cost of the NOLA EP, excluding costs for grant monitoring, evaluation, and dissemination activities, divided by the number of teachers the program will produce (862).

[20] Carrol, T. (2007). Policy Brief: The High Cost of Teacher Turnover. National Commission on Teaching and America's Future.

[21] Bodolsky, A. et al. (2016). Solving the Teacher Shortage: How to Attract and Retain Excellent Educators. Learning Policy Institute.

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the programs, we anticipate that NOLA EP teachers will be more effective than teachers in other urban districts, at a similar cost (see evidence of effectiveness in section A2).

Ultimately, NOLA EP will serve as a three-year bridge to reduce the need for outside philanthropy. As national philanthropic organizations shift their attention away from funding operating costs for third-party non-profits, the partners on this grant – so critical to ensuring that every child in New Orleans has an excellent teacher – will work with the district and schools (who pay fees to these talent organizations) to reduce the need for outside philanthropy to run teacher recruitment for the city.

B3. Incorporation of project purposes, activities, or benefits to the ongoing program

The programming funded by this grant will generate a set of learnings for each partner in pursuit of supporting effective teachers, promoting diversity, and strengthening cultural competency in the educator workforce. Partners will use these learnings to improve the ongoing programming at their organizations, locally and nationally.

Through survey instruments and observations, each partner will collect multiple sources of data from teacher participants, mentor teachers, students and coaches about their experiences and teachers' performance in the program. Partners will use this data to enhance and improve pre-service training, field experience assignments, course content, and coaching/mentoring support for current and future participants to ensure stronger outcomes for students. The programming proposed in NOLA EP is the core work for all of the partners in this grant. Therefore, work that the partners will undertake through this grant will allow continued refinement to their core programming models based on the data they will collect and the changes they will implement in response. This also means

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that partners will sustain the interventions proposed in NOLA EP, and the refinements made as a result of learnings of the project, long after the grant term has ended.

While this information will refine and develop the partners in unique ways, the learnings will also contribute to the national dialogue around supporting effective teachers and promoting diversity and cultural competency across the country. The partners supported by this grant have both local and national reach, and will share and disseminate these lessons widely. University partners, Xavier and Loyola, will share these learnings with other universities and colleges of education seeking to do similar work across the country. National non-profits, TFA, TNTP, and Relay, will share their results with other regions within their organizations that are pursuing similar strategies.

B4. Dissemination of results

NOLA EP partners will work together to disseminate grant findings and resources to other partners around the country through publication of articles, presentations at conferences and convenings, blog posts, and social media. The partners will work with NSNO, a local non-profit organization (Appendix A2) that has an extensive network of support organizations, policymakers, journalists, and thought leaders throughout the country.

1) *Education Cities.* In collaboration with NSNO, grant partners will present on progress towards grant goals three separate times (Y1, Y2, Y3) at meetings held by Education Cities, a non-profit membership organization of city-based intermediaries working to improve education across the country. In these sessions, each partner's leadership will share candid reflections about results, challenges, and best practices.

2) *Host delegations / visit cities*. Leadership from each partner organization will visit at

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least one teacher training program nationally over the course of the grant. This will provide partners with the opportunity to both learn from host programs, and to share data, learnings, and relevant tools and resources with interested parties.

3) *Publish white paper*. The partners will work with NOLA EP's evaluator to create a white paper documenting the project's unique collaborative structure and processes to highlight how teacher recruitment and training entities with diverse models can address a city's teacher pipeline issues holistically. These findings could be particularly informative for communities seeking educational reforms similar to New Orleans.

4) *Blog posts*. NSNO will assist partners in the creation and publication of four blogs per year in an effort to narrate progress on this project and share learnings with the public. Through blogs, newsletters, and social media, NSNO has the capacity to reach over 12,000 readers. All partners will promote these blogs on their social media platforms, amplifying the number of people reached.

QUALITY OF THE PROJECT MANAGEMENT PLAN

C1. Goals, objectives, and outcomes

The project goals, objectives, measures and outcomes are in Appendix B1.

C2. Management plan

The NOLA EP partners have highly qualified teams who are well-positioned to achieve the goals of this project (see Appendix B2 for resumes of key personnel). Loyola, Relay, TFA, TNTP, and Xavier will be responsible for project design and implementation. Xavier will also coordinate all collaboration activities among the partners. NSNO will lead project monitoring, work with the evaluator on formative and outcome evaluations, and drive citywide collaboration on recruitment. McREL

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International will lead the formative and outcome evaluations for the project. See Appendix B3 for the management plan.

C3. Feedback and continuous improvement

Program partners have built-in structures for collecting and analyzing feedback to improve their work over the life of the grant.

Xavier. When residents exit Xavier's MAT program, they will be required to complete a mandatory university exit survey that includes questions to measure the effectiveness of the program. This feedback will be used to improve the program for the next year. In addition, the first three cohorts will be asked to form a focus group at the end of the grant to help the Xavier team identify what worked well and what should be changed in order to better prepare teachers to be effective on their first day in the classroom. All information will be used to continue refining the program over time.

Relay. Relay GSE is deeply committed to learning and continuous improvement. This is evident not only in how the organization approaches teacher development, but also in how the organization evaluates itself in executing strong programming for teachers. Faculty are observed at least twice per month in either core classes (with students) or in deliberate practice (practicing delivering instruction without students present). These observations and evaluations guide organizational decisions. Relay also engages external research partners to support external evaluations and conducts frequent internal studies to analyze their institutional impact and make any necessary shifts.

Loyola. Loyola will use evaluation data to enhance and improve the field experience assignments for their program participants. Soliciting feedback from candidates and mentor teachers in the field, Loyola will review and modify course

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objectives, content, and activities over the life of the grant. In addition, the two grant faculty will meet regularly to discuss discrete aspects of the implementation plan, impact on the program, and preparation of the candidates.

TFA. TFA commits to continuous feedback cycles with all constituents—corps members, staff-members, students, school partners, and alumni—to improve programming. TFA corps members take three anonymous surveys each year, the results of which are used to make strategic decisions about the program grounded in the experiences of participants. TFA solicits feedback from alumni annually via survey to learn about their program experiences. TFA also gives a school leader survey to their hiring partners every three years to better assess their perceptions of the program, the quality of their corps members, and their likelihood of continuing to hire TFA corps members. In conjunction with the ongoing, qualitative analysis of program effectiveness, these results provide multiple sources of data that TFA uses to improve programming.

TNTP. TNTP is committed to using data to identify exemplars, establish proof points, and course correct as needed. TNTP collects perception data throughout the year through program participant surveys, and also regularly solicits feedback from school partners to understand the ways in which fellows have a positive impact in their schools. TNTP assess these data points to inform how to approach and set goals for all components of the program, including recruitment, selection, and training.

Furthermore, TNTP maintains a 13-member internal research and evaluation team to continuously assess and learn from teacher performance data. To date, TNTP has surveyed thousands of principals and students, and conducted nearly 17,000 classroom obsverations as part of a long-term effort to study the relationship between teacher

peformance in pre-service training and teacher performance during the school year. Annual results from this analysis are shared with site-based teams as well as organizational leadership, and are used to make adjustments to TNTP's programming.

D. QUALITY OF PROJECT EVALUATION

McREL International (McREL) will conduct the external evaluation of the project. McREL has served as an external evaluator for several federal education grants and cooperative agreements and is currently the external evaluator for a 2015 development Investing in Innovation (i3) grant as well as the lead institution on a 2016 development i3 grant focused on student noncognitive outcomes. Dr. Katie Stringer will lead the external evaluation. She has been evaluating large federal projects for over 12 years. She is currently the lead evaluator for a NASA public education and outreach cooperative agreement and the aforementioned 2015 i3 grant. She has attended the Institute of Education Sciences Cluster Randomized Trial Institute, is implementing a study that meets WWC standards with reservations, and is supervising a study that meets WWC without reservations. The external evaluation will focus on both implementation and outcome evaluation with the goal of identifying key components of NOLA EP and assessing fidelity of implementation and impact on proximal and distal outcomes.

McREL will meet monthly with NOLA EP partners to facilitate ongoing communication about evaluation activities. McREL will provide interim, annual, and final reports on fidelity and project outcomes and assist with federal 524b reporting. McREL will track performance measures to be reported in the 524b reporting annually. Specifically, McREL will collect and track performance metrics as specified by NOLA EP partners e.g., cost per unit served, percentage of teacher participants who serve

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concentrations of high-need students [and are highly effective] [and serve for at least two years]). McREL also will acquire institutional review board approval.

Process evaluation design. The implementation evaluation will assess the key components as the NOLA EP partners have specified in the logic model in terms of whether they are present and any adjustments to them and why. The refined NOLA EP logic model resulting from this project, which will be informed by the implementation fidelity evaluation, will provide guidance about effective strategies, or key components, for replication or testing in other settings as well as performance feedback and periodic assessment toward meeting project outcomes. Partner organizations will use formative evaluation results to improve program implementation each year of the grant. See Appendix B4 for the description of the fidelity of implementation and project indicators.

Outcome evaluation design. The outcome evaluation will employ a school-level quasi-experimental matched comparison design to assess main effects of NOLA EP for school-level teacher and student performance, which meets WWC Evidence Standards with Reservations. Schools that will be served by NOLA EP will be matched using a process where McREL matches participating schools with non-participating schools based on demographic and School Performance Scores. Partners will provide the list of schools to the LDOE where they will match non-participating teachers with participating teachers based on years of experience (teachers should have two or less years of experience to be considered "novice") and their first year Compass score within the schools identified by McREL. This will provide the LDOE with a matched sample of teachers from which to draw aggregate school-level scores for novice teachers, which they can share with McREL for the evaluation. Confirmatory contrasts will be conducted to examine

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differences in the outcomes of interest at the school level. The school level is chosen because obtaining individual data for teachers in Louisiana requires individual permission from each teacher. It would be unlikely that consent could be obtained for all comparison schools' teachers given that they are not participating in grant activities and therefore, not be feasible for the project. In addition to designing a study that meets WWC Evidence Standards with Reservations, the evaluation will examine changes in participant cultural competence, culturally responsive teaching practices, and performance.

Table 3 - NOLA EP Outcome Study Questions

Evaluation Question	Indicators	Data Source(s)/Timing
1. What is the effect of two years of NOLA EP on school-level teacher performance?	State performance scores	School-level Compass professional practice scores for novice teachers (annual)
2. What is the effect of two years of NOLA EP on school-level student achievement?	State achievement scores	School-level Compass student growth scores for novice teachers (annual)
3. What is the effect of two years of NOLA EP on teacher retention?	Teacher retention rates for NOLA EP participants vs. non-participants	School-level administrative data (annual)

4. What is the effect of two years of NOLA EP on percentage of teachers who are of color?	Percentage of teachers who are people of color for NOLA EP participants vs. non-participants	School-level administrative data (annual)
5. To what extent does teacher performance change over time for participants?	State performance scores	Individual Compass scores, professional practice and student growth (annual)
6. To what extent does teacher cultural competence change over time for participants?	Teacher cultural competence Teacher knowledge of own biases based on race	Teacher online survey Teacher online implicit association test (semi-annual) and interview after test (annual)
7. To what extent does implementation of culturally responsive teaching practices change over time for participants?	Teacher demonstration culturally responsive teaching practices (e.g., appropriate text selection and using positive psychology to identify students strengths)	Classroom observations (annual)

Sample. The annual sample for the evaluation will include approximately 55 intervention

schools from Orleans Parish and 124 East Baton Rouge Parish and Jefferson Parish

counterfactual schools from the other parishes in Louisiana. There are a total of 147 possible matches for the 55 Orleans Parish schools. In total, the sample will be 165 schools in treatment and comparison groups.

Measures. Measures for the WWC with reservations study include the school-level Compass scores (an average of novice teacher Compass professional practice scores and student growth scores), teacher retention rates, and percentage of teachers who are of color employed by the schools. LDOE's Compass Evaluation assesses both student outcomes and professional practice to create one score for every teacher in Louisiana. For the evaluation, we will examine the professional practice and student outcomes scores separately to analyze impact on both. LDOE issues annual School Performance Scores that primarily assess student achievement. Proposed changes for the 2018 school year include having 25% of the score coming from growth on tests measuring mastery of fundamental math and English Language Arts skills for K-8 and 12.5% for high schools; 5% of the score will measure whether a school is providing students with a well-rounded education. All school-level data will be obtained from publicly available information maintained by the districts and/or LDOE or through special request of non-publicly available data from LDOE.

For the questions related to changes in the NOLA EP participant outcomes, the following measures will be used:

Teacher cultural competence will be assessed by a 16-item scale developed and tested with pre-service teachers.[22] The three factors with good reliability ($\alpha \geq .70$) will be used: instructional strategies, attitudes toward student learning, and stereotypes.

Teacher awareness of their own implicit biases based on race will be assessed using the Implicit Association Test followed by an interview to assess participants' perceptions of their own biases based on the results of the IAT.[23] An IAT has a respondent move words into one of two categories. The categories into which and speed at which individuals move the words into the categories indicate implicit bias. The IAT will be administered with the semi-annual online survey. For a subset of participants, the results of the IAT will be shared with the respondent, and he or she will be asked questions to gauge awareness of the biases reflected in the results and any change in those biases reflected or not reflected in the results. Interviews will be conducted with a subsample of participants stratified based on grade level and subject taught ($n = 32$). Interviews will take place via phone once per year.

Culturally responsive teaching practices will be assessed using a classroom observational tool that looks for the presence or absence or extent to which culturally responsive behaviors are exhibited. Observations will take place in a subsample of classrooms using stratified sampling based on grade level and subject taught ($n = 32$). The observational tool and rubric will be developed in conjunction with the culturally responsive teaching strategies taught by the partners' training programs.

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[22] Bustmante, R. et. al. (2016). *Evaluation of a cultural competence assessment for preservice teachers*. The Teacher Educator, 51, 297-313.
[23] Greenwald A. et. al. (1998). *Measuring individual differences in implicit cognition: The Implicit Association Test.* Journal of Personality and Social Psychology, 74, 1464–1480.

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Within the NOLA EP participants, these measures, along with the individual Compass scores, will be explored both as direct outcomes (i.e., directly impacted by the NOLA EP intervention) and as potential mediating variables between NOLA EP and the individual Compass scores. Individual Compass scores will be obtained from the LDOE for participants with their written consent.

Analytic strategy. To determine and sample an appropriate comparison group for the treatment group, propensity score matching will be used. Evaluators will match treatment schools with non-participating schools in Louisiana based on school-level Compass and School Performance Score prior to the intervention, as well as school type (secondary, elementary, K-12, K-8) and pupil-teacher ratio. For every one intervention school, evaluators will attempt to find two matches. Participating teachers will be matched to nonparticipating teachers in schools by the LADOE based on Compass scores and number of years of experience. LADOE will provide aggregate school-level outcomes to McREL for analysis. The average school-level Compass score for novice teachers and the percentage of novice teachers in the sample who have a Compass score will be used to determine baseline equivalence of the schools.

The outcome evaluation will examine NOLA EP effects on proximal and distal outcomes. For the WWC with Reservations study, for which the outcomes are at the school-level and continuous, linear regression will be employed. The linear regression model is specified as follows:

$$Y_i = \beta_0 + \beta_1(NOLA\ EP)_i + \beta_2(COMPASS)_i + e_i$$

Where Y_i is the outcome measure of interest (see Table 3); β_0 is the average school-level outcome; β_1 is the adjusted mean difference in the outcome between participating and

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non-participating schools; NOLA EP is an indicator variable for the intervention coded as 1 for NOLA EP schools and 0 for the matched comparison schools; β_2 is the additive effect of the pre-intervention measure (Compass score) of the corresponding; and e_i is the random error in the outcome of interest associated with school i.

For the individual level outcomes, hierarchical linear modeling will be employed such that teachers are nested in schools. An example equation for these analyses is below.

$$Y_{ij} = \gamma_{00} + \gamma_{01}NOLA_j + \gamma_{02}SPS_j + \gamma_{10}COLOR_{ij} + \gamma_{20}NATIVE_{ij} + \gamma_{40}FEMALE_{ij} +$$

$$\gamma_{50}GRADE_{ij} + \gamma_{60}COMPASS_{ij} + u_{0j} + r_{ij}$$

Where Y_{ij} is the outcome measure of interest (see Table 3) for teacher i in school j; γ_{00} is the average intercept on the outcome of interest; γ_{01} is whether the school was implementing the intervention; γ_{02} is the School Performance Score; $\gamma_{20\text{-}}\gamma_{60}$ are teacher level covariates group mean centered for teacher i in school j (dummy coded variables representing whether a participant is of color, from the community served, and participant gender); u_{0j} is the level 2 random error; r_{ij} is level 1 random error.

Power and attrition. The quasi-experimental school-level design with appropriate sample size for detecting statistical significance ensures that the external evaluation will meet WWC without Reservations. Minimum detectable effect size (MDES) were calculated with Optimal Design Plus. With a desired 80% power, given an estimated 55 schools being served by the grant and their 110 matches (1:2 match) and cluster level reliability of .70, the MDES is .53. Because all data are provided publicly, and the partner sites will serve the schools identified as intervention schools regardless of the schools agreeing to "participate," no attrition is anticipated. However, if something were to change, such as a school closing, up to 15 schools could attrit and still have a MDES of .55. As a proxy

measure of what to expect for effect size, the average effect size from 2013-14 to 2015-16 for the Orleans Parish in percentage of teachers who were highly effective was .08 SD. This means that approximately 16 percentage points more teachers by school would have be rated as highly effective in the intervention group than the comparison group for there to be 80 percent power to detect an MDES of .55.

For addressing missing data due to attrition in the analytic models, Graham, Cumsille, and Elek-Fisk recommend a case deletion strategy in situations where missing data do not exceed five percent.[24] If the evaluation team finds that the amount of missing data on one or more outcomes exceeds five percent, a data-based multiple imputation procedure will be employed using the expectation maximization algorithm.[25] Specifically, missing data will be replaced with values predicted from the relationships between all of the variables using all available observations collected while the participant was active in NOLA EP as well as any available data in the past three years (collected by the state). Randomly selected residual error values will then be added to the imputed values to ensure the replacement process does not incorrectly reduce the natural variation in the data.

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[24] Graham, J. W., Cumsille, P. E., and Elek-Fisk, E. (2003). Methods for handling missing data. In J. A. Schinka & W. F. Velicer (Eds.). *Research Methods in Psychology* (pp. 87–114). Volume 2 of *Handbook of Psychology* (I. B. Weiner, Editor-in-Chief). New York: John Wiley & Sons.

[25] Puma, M. et. al. (2009). *What to Do When Data Are Missing in Group Randomized Controlled Trials (*NCEE 2009-0049). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

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